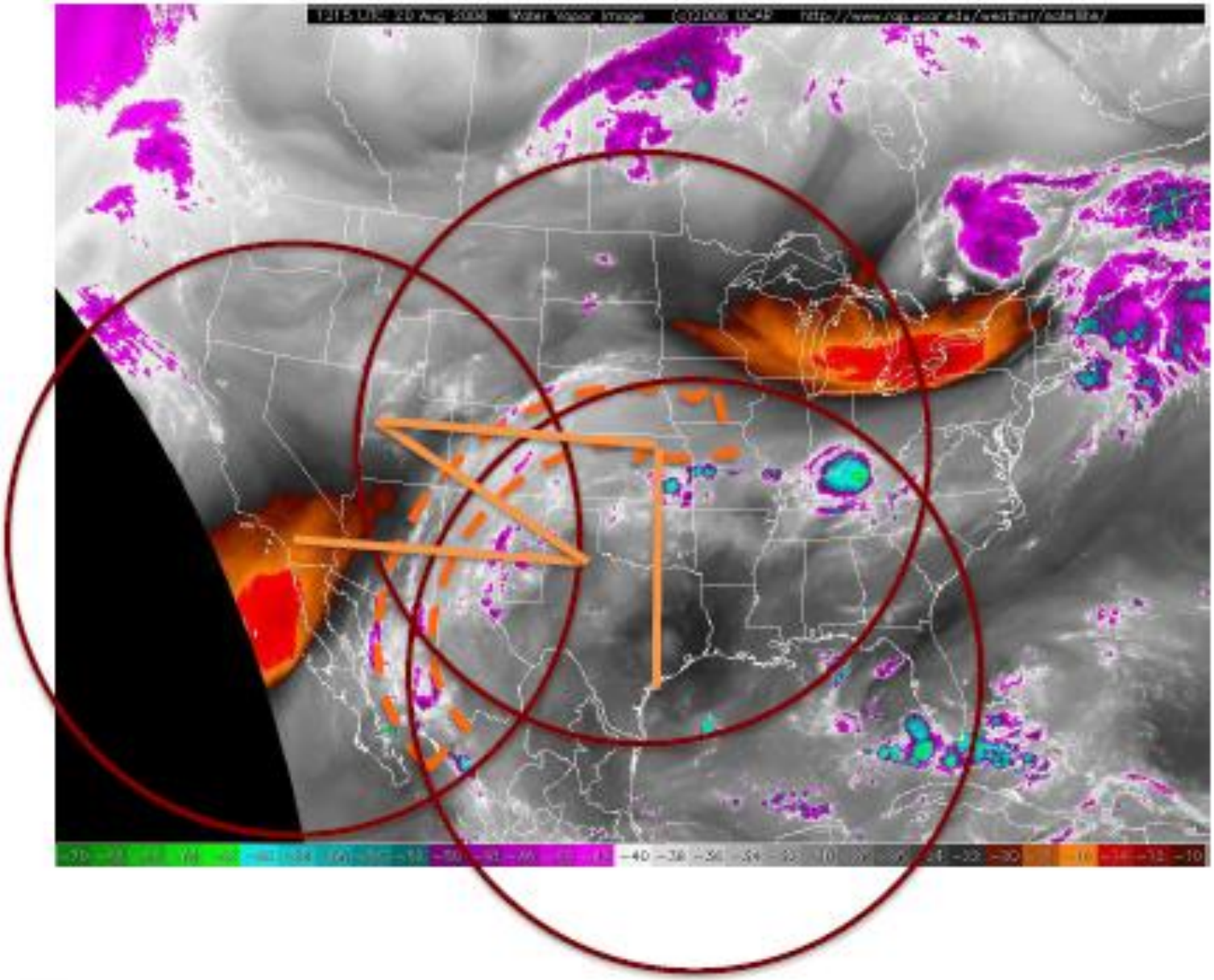
Types of the Flights

- **UTLS water vapor and deep convection**
  - **Large scale surveys; complementary studies of convective events**
  - **UTLS gradient survey flight: from Houston vertical profiling and horizontal mapping at LS 150-<80 hPa levels**
    - **Gradient survey flight: stair-steps as compromise between horizontal legs and vertical ramp profiling**
    - **August flights most useful for NAM**
  - **Deep convection detrainment flight: Both ER2 and DC8**
    - **Need modeling tools (trajectory models?) to identify downwind regions**
    - **Evaluate near-field and downwind stratospheric impacts**

NAM sampling strategy – Palmdale/Houston



Types of the Flights

- **NAM flow and associated convection**
  - **Horizontal and vertical gradients associated with the NAM flow: both DC8 and ER2**
  - **Targeting deep convective systems**
    - **Difficulty to forecast late afternoon convective events**
- **Convective transport/STE by MCS, etc.**
  - **Sample impacts of different “flavors” of convection on UT/LS water vapor/trace gases/etc.**